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**PRELIMINARY ASSESSMENT/
VISUAL SITE INSPECTION**

**METAL FINISHING RESEARCH CORPORATION
CHICAGO, ILLINOIS
ILD 045 700 945**

FINAL REPORT

Prepared for

**U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Waste Programs Enforcement
Washington, DC 20460**

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EXECUTIVE SUMMARY

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PRC Environmental Management, Inc. (PRC), performed a preliminary assessment and visual site inspection (PA/VSI) to identify and assess the existence and likelihood of releases from the solid waste management units (SWMU) at the Metal Finishing Research Corporation (MFRC) facility in Chicago, Cook County, Illinois. This summary highlights the results of the PA/VSI and the potential for releases of hazardous wastes or hazardous constituents from the SWMUs identified. In addition, a completed U.S. Environmental Protection Agency (EPA) Preliminary Assessment Form (EPA Form 2070-12) is included in Attachment A to assist in prioritizing RCRA facilities for corrective action.

The MFRC facility manufactures liquid and powdered proprietary chemical blends used by the metal industry for heat treating and finishing. The facility generates and manages the following waste streams: nonhazardous rinse water and wastewater treatment system (WWTS) sludge (D007). The facility formerly blended alkaline powders containing cyanide salts. The facility also formerly treated rinse waters to remove cyanide. The operations that generated these cyanide-containing rinse waters were discontinued in May 1992.

MFRC has been the sole owner and operator of the facility since its construction in 1962. The facility occupies 1.2 acres in a mixed-use area and employs 13 people. In 1989, the office and warehouse buildings were constructed in an area owned by MFRC. MFRC had been leasing the property to an adjacent business who used the area for parking. MFRC is a wholly-owned subsidiary of the Heatbath Corporation. The facility is currently regulated as a hazardous waste treatment, storage, or disposal (TSD) facility. On September 28, 1988, MFRC applied for a Part A permit withdrawal. The request was denied by the Illinois Environment Protection Agency (IEPA). MFRC is currently preparing a closure plan for the Hazardous Waste Storage Area (SWMU 2). On November 8, 1992, IEPA revoked the facility's interim status; however, MFRC is still regulated as a TSD pending closure of the Hazardous Waste Storage Area (SWMU 2).

The PA/VSI identified the following two SWMUs at the facility:

Solid Waste Management Units

1. Wastewater Treatment System (WWTS)
2. Hazardous Waste Storage Area

No areas of concern were identified during the PA/VSI.

All wastes generated at the facility are managed indoors. Process wastewater is contained in a tile-lined drainage system. All concrete floors are epoxy sealed. MFRC does not store substances that contain solvents or volatile organic compounds (VOC) during its operations. The facility is located in an urbanized area that is mostly paved. Facility SWMUs have a low potential for release to ground water, surface water, air, and on-site soils.

The MFRC facility is located in a mixed-use area within 0.1 mile of residences. Facility access is controlled by locked doors and a 24-hour security alarm system.

The nearest surface water body, South Fork of the Chicago River, is 1.3 miles northwest of the facility. The South Fork of the Chicago River is used for industrial purposes and leads to the Chicago Sanitary and Ship Canal, which flows southwest and is also used for industrial purposes.

Ground water is not used as a drinking water source in the area. Sensitive environments are not located on site. The nearest sensitive environment is an open water area in Sherman Park located 2.0 miles southwest of the facility. The facility has had no documented releases to the environment.

PRC recommends no further action at this time.

1.0 INTRODUCTION

PRC Environmental Management, Inc. (PRC), received Work Assignment No. C05087 from the U.S. Environmental Protection Agency (EPA) under Contract No. 68-W9-0006 (TES 9) to conduct preliminary assessments (PA) and visual site inspections (VSI) of hazardous waste treatment and storage facilities in Region 5.

As part of the EPA Region 5 Environmental Priorities Initiative, the RCRA and CERCLA programs are working together to identify and address RCRA facilities that have a high priority for corrective action using applicable RCRA and CERCLA authorities. The PA/VSI is the first step in the process of prioritizing facilities for corrective action. Through the PA/VSI process, enough information is obtained to characterize a facility's actual or potential releases to the environment from solid waste management units (SWMU) and areas of concern (AOC).

A SWMU is defined as any discernible unit at a RCRA facility in which solid wastes have been placed and from which hazardous constituents might migrate, regardless of whether the unit was intended to manage solid or hazardous waste.

The SWMU definition includes the following:

- RCRA-regulated units, such as container storage areas, tanks, surface impoundments, waste piles, land treatment units, landfills, incinerators, and underground injection wells
- Closed and abandoned units
- Recycling units, wastewater treatment units, and other units that EPA has usually exempted from standards applicable to hazardous waste management units
- Areas contaminated by routine and systematic releases of wastes or hazardous constituents. Such areas might include a wood preservative drippage area, a loading or unloading area, or an area where solvent used to wash large parts has continually dripped onto soils.

An AOC is defined as any area where a release of hazardous waste or constituents to the environment has occurred or is suspected to have occurred on a nonroutine and nonsystematic basis. This includes any area where a strong possibility exists that such a release might occur in the future.

The purpose of the PA is as follows:

- **Identify SWMUs and AOCs at the facility**
- **Obtain information on the operational history of the facility**
- **Obtain information on releases from any units at the facility**
- **Identify data gaps and other informational needs to be filled during the VSI**

The PA generally includes review of all relevant documents and files located at state offices and at the EPA Region 5 office in Chicago.

The purpose of the VSI is as follows:

- **Identify SWMUs and AOCs not discovered during the PA**
- **Identify releases not discovered during the PA**
- **Provide a specific description of the environmental setting**
- **Provide information on release pathways and the potential for releases to each medium**
- **Confirm information obtained during the PA regarding operations, SWMUs, AOCs, and releases**

The VSI includes interviewing appropriate facility staff; inspecting the entire facility to identify all SWMUs and AOCs; photographing all visible SWMUs; identifying evidence of releases; making a preliminary selection of potential sampling parameters and locations, if needed; and obtaining additional information necessary to complete the PA/VSI report.

This report documents the results of a PA/VSI of the Metal Finishing Research Corporation (MFRC) facility (EPA Identification No. ILD 045 700 945) in Chicago, Cook County, Illinois. The PA was completed on January 6, 1993. PRC gathered and reviewed information from the Illinois Environmental Protection Agency (IEPA), National Oceanic and Atmospheric Administration (NOAA), Illinois State Geological Survey (ISGS), U.S. Geological Survey (USGS), U.S. Department of Commerce (USDC), Federal Emergency Management Agency (FEMA), Gale Research Company, Chicago Department of Planning and Development, Metropolitan Water Reclamation District of Greater Chicago (MWRDGC), and from EPA Region 5 RCRA files. The VSI was conducted on January 14, 1993. It included interviews with facility

representatives and a walk-through inspection of the facility. PRC identified two SWMUs and no AOCs at the facility.

PRC completed EPA Form 2070-12 using information gathered during the PA/VSI. This form is included in Attachment A. The VSI is summarized and five inspection photographs are included in Attachment B. Field notes from the VSI are included in Attachment C.

2.0 FACILITY DESCRIPTION

This section describes the facility's location; past and present operations; waste generating processes and waste management practices; history of documented releases; regulatory history; environmental setting; and receptors.

2.1 FACILITY LOCATION

The MFRC facility is located at 4025 South Princeton Avenue in Chicago, Cook County, Illinois. Figure 1 shows the location of the facility in relation to the surrounding topographic features (latitude 41°49'01" N and longitude 87°38'00" W).

The facility is bordered on the north and east by Chicago International/Chicago Inc.; on the west by Jernberg Forging Company; and on the south by a residential area.

2.2 FACILITY OPERATIONS

MFRC, a wholly-owned subsidiary of Heatbath Corporation, is a chemical blending operation that manufactures products used by the metal finishing industry during heat treating and metal finishing operations. Wastewater streams are generated when the acidic liquid blending tanks and alkaline powder blending tanks are washed and when wastewater from the wet scrubbers in the powder blending area are drained. Wastewater is treated in the Wastewater Treatment System (SWMU 1).

Raw materials used to manufacture finished goods include various salts, acids, and alkalis. Raw materials are stored in 50-to 100-pound bags and in 55-gallon steel and plastic drums. These bags and drums are stored in a warehouse that adjoins the production area. Sulfuric, nitric, phosphoric, and hydrochloric acids are stored in aboveground storage tanks. Finished products are stored in the warehouse in 55-gallon steel and plastic drums, in other drums of various sizes, or in returnable 360-gallon tote bins.

The facility has manufactured metal finishing and heat treating proprietary products since its construction in 1962. The facility employs 13 people. In the past, alkaline powders and cyanide salts were blended at the facility. This line of products was discontinued in May 1992. The facility treated rinse water contaminated with cyanide through August 1992.

The facility is comprised of two buildings each approximately 26,000 square feet. The building to the north, the production building, was constructed in 1962. The eastern half of this

building is used to store finished products and raw materials. The liquid blending room, powder blending room, and the wastewater treatment area are located in the western half of the production building. The Hazardous Waste Storage Area (SWMU 2) is in the southeastern part of the building and is approximately 10 feet by 35 feet. A corridor connects the production facility to a warehouse of approximately 26,000 square feet. The warehouse, built in 1989, stores raw materials and finished goods. The land underlying the warehouse was leased by MFRC to an adjacent business.

2.3 WASTE GENERATION AND MANAGEMENT

Wastes are generated and managed at various locations at the facility. The facility's SWMUs are identified in Table 1. The facility layout, including SWMUs, is shown in Figure 2. The facility's waste streams are summarized in Table 2.

The waste streams generated at the facility include nonhazardous rinse water and WWTS sludge (D007). Rinse water may contain chromium, depending on the product MFRC is blending. Rinse waters are generated when chemical blending tanks in the liquid acid blending room and powder blending room are washed and when the wet scrubbers in the powder blending room are drained. Wastewater treatment sludge (D007) is generated during the treatment of rinse water.

An average of 19,300 gallons of rinse water is treated per month. Rinse waters are gravity fed through a floor drainage system to the WWTS (SWMU 1). Treatment consists of pH neutralization and metal hydroxide precipitation. This treatment generates WWTS sludge (D007). The sludge is filtered, dried, and placed in a 55-gallon steel drum at the point of generation. When full, the drum is transferred to the Hazardous Waste Storage Area (SWMU 2), and the sludge is emptied into a 1-cubic-yard Chemical Waste Management chemical (chem) pack. The average volume of sludge generated is three 1-cubic-yard chem packs per month. Van Waters and Rogers, Inc. (VW&R), transports the sludge to the Laidlaw Environmental Services, Inc. (Laidlaw), hazardous waste landfill in Pinewood, South Carolina. The filtrate, approximately 19,100 gallons per month, is discharged to Metropolitan Water Reclamation District of Greater Chicago (MWRDGC).

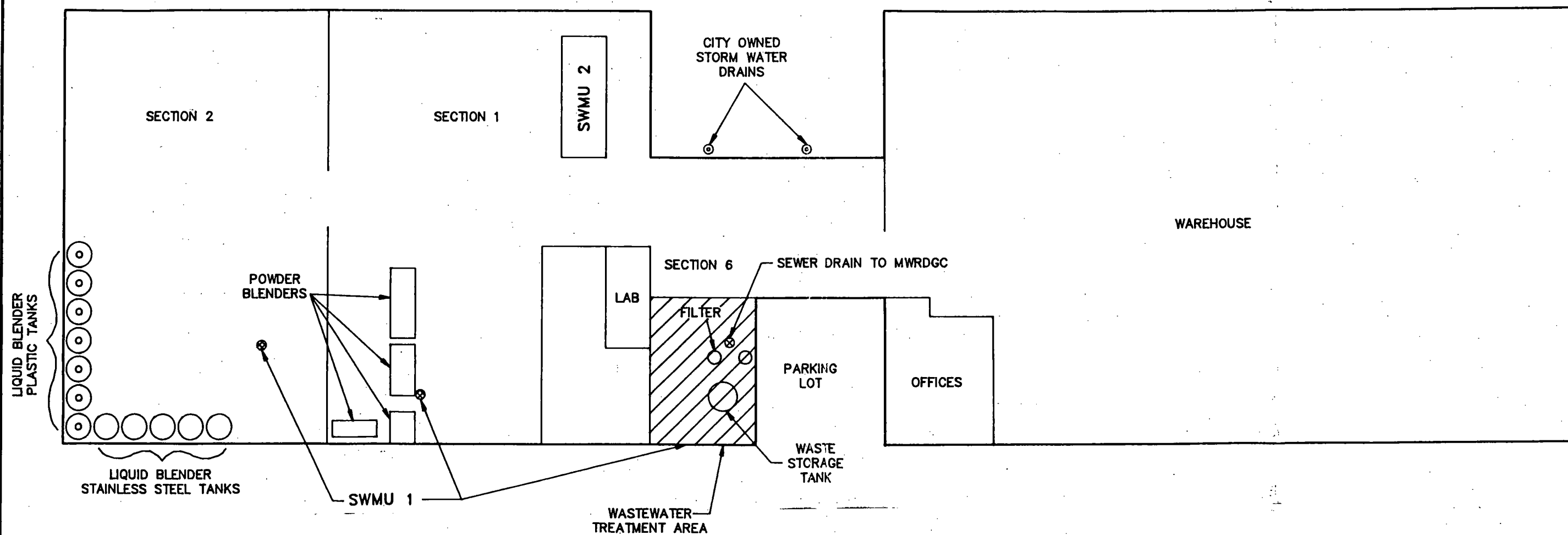
The facility formerly blended alkaline powders and cyanide salts. Rinse water, generated when the blending tanks were washed out, underwent cyanide destruction, pH neutralization, and heavy metal precipitation. The resulting WWTS sludge (D007) was placed in 55-gallon steel

TABLE 1
SOLID WASTE MANAGEMENT UNITS

<u>SWMU Number</u>	<u>SWMU Name</u>	<u>RCRA Hazardous Waste Management Unit^a</u>	<u>Status</u>
1	Wastewater Treatment System (WWTs)	No	Active; less than 90-day storage and treatment of hazardous waste
2	Hazardous Waste Storage Area	Yes	Active; greater than 90-day storage of hazardous waste

Note:

^a A RCRA hazardous waste management unit is one that currently requires or formerly required submittal of a RCRA Part A or Part B permit application.



LEGEND

- SWMU 1 WASTEWATER TREATMENT SYSTEM
- SWMU 2 HAZARDOUS WASTE STORAGE AREA
- ⊗ SEWER DRAINS TO WASTEWATER TREATMENT SYSTEM

NOT TO SCALE

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CHICAGO, ILLINOIS

FIGURE 2
FACILITY LAYOUT

PRC ENVIRONMENTAL MANAGEMENT, INC.

**TABLE 2
SOLID WASTES**

<u>Waste/EPA Waste Code^a</u>	<u>Source</u>	<u>Solid Waste Management Unit</u>
Rinse water/NA	Powder and liquid blending tank washdowns, wet scrubber drainage	SWMU 1
WWTS Sludge/D007	Rinse water treatment	SWMU 2

Note:

^a Not applicable (NA) designates nonhazardous waste.

drums at the point of generation and transferred to the Hazardous Waste Storage Area (SWMU 2) for storage. In May 1992, the facility discontinued manufacturing cyanide salt-formulated products. Until August 1992, MFRC continued to treat powder room rinse water to destroy residual cyanide remaining in the system. The resulting WWTs sludge (D007) was placed in 55-gallon steel drums and transferred to the Hazardous Waste Storage Area (SWMU 2) for storage.

2.4 HISTORY OF DOCUMENTED RELEASES

The facility has no history of documented releases.

2.5 REGULATORY HISTORY

On August 4, 1980, MFRC submitted a Notification of Hazardous Waste Activity form to EPA (MFRC, 1980a). On November 17, 1980, MFRC submitted a RCRA Part A permit application. The Part A permit application included a container storage area with a capacity of 55 gallons per day; referring to the Hazardous Waste Storage Area (SWMU 2). The following waste codes were listed on the Part A permit application: sodium cyanide (P106), ignitables (D001), corrosive wastewater (D002), chromium (D007), and barium (D005) (MFRC, 1980b).

There is no documentation in IEPA, EPA, or facility files that ignitable waste (D001) was ever generated or managed at the facility. Facility representatives stated that corrosive wastewater (D002) was filed protectively. Rinse waters and sludges have never been analyzed for barium (D005) and manifests indicate that all WWTs sludge has been assigned the D007 waste code. There is no documentation concerning the disposal of sodium cyanide or containers with sodium cyanide residue (P106).

IEPA inspected the facility on three occasions between 1982 and 1989 (IEPA, 1982; 1986; 1989a). These inspections revealed violations concerning waste analysis plans, personnel training plans, closure and post-closure plans, and other paperwork. All violations and notices of noncompliance have been resolved and are noted in IEPA files (IEPA, 1991).

The facility is currently regulated as a generator of hazardous waste and a treatment, storage, or disposal (TSD) facility. Manifests indicate that hazardous waste (D007) has been stored for greater than 90 days. On November 8, 1992, the facility's interim status was revoked by IEPA (IEPA, 1989b), thus requiring MFRC to initiate closure of the Hazardous Waste Storage Area (SWMU 2).

On August 19, 1991 MFRC submitted a closure plan for the Hazardous Waste Storage Area (SWMU 2). The plan was not approved for various paperwork deficiencies. MFRC is currently addressing the deficiencies and preparing a new plan.

RCRA files reveal contradicting letters by IEPA personnel on whether MFRC should be regulated as a generator only or a TSD facility. On September 28, 1988, MFRC submitted a Part A permit application withdrawal request, asking that the facility's status be changed from a TSD to a generator (MFRC, 1988). This request was denied because manifests indicated that waste shipments occurred more than 90 days after the previous shipment was sent off site; therefore, until MFRC closes the RCRA-regulated Hazardous Waste Storage Area (SWMU 2), the facility will remain regulated as a TSD (EPA, 1993).

MFRC is not required to have air permits. MFRC discharges filtrate from the WWTS (SWMU 1) directly to a combined sewer of the MWRDGC. There is no permit required for this release.

The facility has never used underground storage tanks. PRC did not observe any documents indicating CERCLA activity at the facility.

2.6 ENVIRONMENTAL SETTING

This section describes the climate; flood plain and surface water; geology and soils; and ground water in the vicinity of the facility.

2.6.1 Climate

The climate in Cook County is continental, with cold winters and warm summers. The average daily temperature is 49 degrees Fahrenheit (°F). The lowest average daily temperature is 21.1 °F in January. The highest average daily temperature is 83.6 °F in July (Gale, 1978).

The total annual precipitation for the county is 35.12 inches (NOAA, 1991). The median annual precipitation for the county is 34 inches (NOAA, 1991; USDC, 1968). The mean annual lake evaporation is 29.5 inches (USDC, 1968). The average snowfall from November to April is 37 inches. The 1-year, 24-hour maximum rainfall recorded in the area is 6.24 inches (Gale, 1978).

The prevailing wind is from the west-southwest. Average wind speed is highest in March at 11.8 miles per hour from the west (USDC, 1968).

2.6.2 Flood Plain and Surface Water

MFRC is not located in a 100-year flood plain (FEMA, 1992). The topography in the vicinity of the site exhibits low relief with a gentle slope to the southeast. The nearest bodies of water are the South Fork of the Chicago River, which lies 1.3 miles to the northwest of the facility and Lake Michigan which lies 2 miles to the east of the facility. The South Fork is used for industrial purposes and leads to the Chicago Sanitary and Ship Canal, which flows southwestward and is also used for industrial purposes (USGS, 1980).

Natural drainage in the vicinity of the facility has been altered by roadways, structures, and other features. Surface water runoff from the facility flows into storm sewers, which are located at each side of the loading docks on the east side of the facility. These sewers discharge to the Chicago Sanitary and Ship Canal through the combined sanitary and MWRDGC sewer. Permits are not required for storm water runoff discharge to the combined sewer system.

2.6.3 Geology and Soils

Facility-specific geology information was not available; therefore, regional information is presented. The MFRC facility is located on Lake Plain deposits from glacial Lake Chicago (present Lake Michigan). The Lake Plain deposits are a member of the Wadsworth Till of the Wedron Formation of the Pleistocene Epoch. The Wadsworth Till was deposited during the Wisconsin glacial stage between approximately 12,500 and 22,000 radiocarbon years before present (BP) (ISGS, 1971).

The Wadsworth Till is a gray till interbedded with sorted sediments and composed primarily of sheet-like deposits of silt and clay-sized products separated by beds of sand and gravel. The thickness of the unconsolidated deposits in the vicinity of the facility is approximately 50 feet (ISGS, 1971).

The unconsolidated sediments in the region unconformably overlie Silurian-age bedrock. The uppermost bedrock unit is dolomite or dolomitic limestone of the Niagarian and Alexandrian Formation. The Silurian-age formations were typically formed as reef deposits built while Illinois lay under a shallow sea between 400 and 435 million years BP. The thickness of the Silurian-age formation in the vicinity of the facility is approximately 200 to 250 feet (ISGS, 1971).

In the vicinity of the facility, underlying the Silurian bedrock units is the 200-foot-thick Maquoketa Shale Group, deposited during the Ordovician period. The Maquoketa Shale Group is composed of several individual shale formations and a limestone formation deposited approximately 435 to 600 million years BP (ISGS, 1971).

The older Ordovician and Cambrian bedrock units beneath the Maquoketa Shale Group are composed primarily of limestone and sandstone and are typically in excess of 2,000 feet thick (ISGS, 1971).

2.6.4 Ground Water

The till layer of the Wadsworth Till generally does not provide sufficient yields to be utilized as a drinking water source because of its low permeability. The localized interbedded sand, silt, and gravel deposits can yield moderate quantities of ground water. Recharge to the till and associated localized sand, silt, and gravel units typically occurs locally from precipitation (ISGS, 1955).

The bedrock unit below the unconsolidated material in northern Illinois is an important aquifer; however, ground water from the aquifer is not used as a drinking water source in Chicago because of the availability of water from Lake Michigan. Ground water in the Niagarian and Alexandrian aquifers ranging from 50 to 400 feet below ground surface (bgs) is primarily obtained from joints, fissures, and solution cavities. The water-bearing openings are irregularly distributed both vertically and horizontally in the units (ISGS, 1955).

Beneath the confining Maquoketa Shale Group are high yielding Ordovician- and Cambrian-age Galesville, Mt. Simon Sandstone, and Eau Claire and Franconia Formations. These units are frequently used aquifers in northeastern Illinois. The Galesville sandstone ranges in depth from 1000- to 1800-feet in Cook County and at one time most municipal and major industrial water supplies were obtained from this aquifer (ISGS 1955).

2.7 RECEPTORS

MFRC occupies 1.2 acres in an industrial and residential area in Chicago, Cook County, Illinois. Chicago has a population of about 3 million people. MFRC employs 13 people. The facility is bordered on the north and east by Chicago International/Chicago, Inc.; on the west by Jernberg Forging Company; and on the south by several single family residences.

The nearest residential area is located about 0.1 mile south of the facility. The facility is equipped with double-locked door entrances and a 24-hour security alarm system.

The nearest surface water body, the South Fork Chicago River, is located 1.3 miles northwest of the facility and is used for industrial purposes. Other surface water bodies in the area include Lake Michigan, 1.8 miles east; ponds in Sherman Park 2.0 miles southwest, Washington Park, 2.2 miles southwest; and McKinley Park, 2.4 miles west-northwest of the facility.

Ground water is not used as a drinking water source in Chicago because of the availability of water from Lake Michigan.

Sensitive environments are not located on site. The nearest sensitive environment, a wetland, is located 2.0 miles southwest. This area is an excavated open water area located in Sherman Park.

3.0 SOLID WASTE MANAGEMENT UNITS

This section describes the two SWMUs identified during the PA/VSI. The following information is presented for each SWMU: description of the unit, dates of operation, wastes managed, release controls, history of documented releases, and PRC's observations. Figure 2 shows the SWMU locations.

SWMU 1

Wastewater Treatment System

Unit Description:

The WWTS consists of a sewer system with a drain in the acid liquid blending room and the powder blending room. This sewer system vents to two holding tanks in the wastewater treatment area. The wastewater treatment area is approximately 30-by 60-feet. The WWTS consists of two approximately 900-gallon holding tanks, two approximately 1,100-gallon treatment tanks, one 2,600-gallon settling tank, and one filter press. The holding and treatment tanks are constructed of lined concrete and are inground. The system treats an average of 19,300 gallons of rinse water per month. A 55-gallon drum is filled with dried hazardous waste sludge (D007), which is a product of the WWTS.

Date of Startup:

The unit began operation in 1973. Wastewater treatment practices by the facility from 1962 to 1973 are unknown.

Date of Closure:

This unit is active.

Wastes Managed:

This unit manages nonhazardous drainage rinse water generated when acidic liquid blending tanks and alkaline powder blending tanks are washed and when powder room wet scrubbers are drained. MFRC treats the rinse water in batches, generating WWTS sludge.

This unit formerly managed nonhazardous rinse water generated by manufacturing powdered products formulated with cyanide salts. Rinse water from the powder blending room was treated to destroy cyanide using sodium hypochlorite. In May 1992, MFRC discontinued manufacturing cyanide salt-containing products. Until

August 1992, MFRC continued to treat powder room rinse water for cyanide to destroy residuals that may have been in the system.

Release Controls:

This unit's drainage system has a corrosive-resistant tile lining. Holding and treatment tanks are constructed of lined concrete without secondary containment. Floor drains direct spills to the WWTS. All concrete is epoxy-sealed. The unit is located indoors and is equipped with high-level alarms.

**History of
Documented Releases:**

There is no history of documented releases from this unit.

Observations:

During the VSI, the unit was treating rinse water. PRC observed a 4-foot-radius stained area around the drain in the acid liquid blending room; however, the concrete was not pitted or cracked. PRC observed that the area around the drain in the powder blending room was stained; however, the concrete was not pitted or cracked. No evidence of spills or overflows was observed around the holding and treatment tanks (see Photographs No. 1, 2, 3, and 4).

SWMU 2

Hazardous Waste Storage Area

Unit Description:

The Hazardous Waste Storage Area is an indoor, 10-foot by 35-foot, epoxy-sealed concrete pad located in the southeastern quarter of the production facility. Yellow paint clearly marks its boundaries and "Hazardous Waste Storage Area" is clearly printed in the yellow paint. There are no floor drains in this unit. The nearest floor drain is 50 feet away. This drain leads to the WWTS.

Date of Startup:

This unit began operation about 1973. Storage practices of the facility from 1962 to 1973 are unknown.

Date of Closure:

This unit is active.

Wastes Managed:

This unit manages hazardous dried WWTS sludge (D007) generated by the WWTS (SWMU 1). The sludge is stored in 1-cubic-yard chem packs until it is picked up for disposal by Van Waters and

**Rogers and landfilled in Laidlaw's South Carolina Pinewood
Hazardous Waste landfill.**

Release Controls:

This unit is an epoxy-sealed concrete pad located indoors. It manages dried WWTs sludge (D007). There are no berms, dikes, or drains in the area.

**History of
Documented Release:**

No releases from this unit have been documented.

Observations:

During the VSI, the unit contained one full steel-strapped chem pack and one partially full chem pack (see Photograph No. 5).

4.0 AREAS OF CONCERN

PRC identified no AOCs during the PA/VSI.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The PA/VSI identified two SWMUs and no AOCs at the MFRC facility. Background information on the facility's location; operations; waste generating processes and waste management practices; history of documented releases; regulatory history; environmental setting; and receptors is presented in Section 2.0. SWMU-specific information, such as the unit's description, dates of operation, wastes managed, release controls, history of documented releases, and observed condition, is presented in Section 3.0. Following are PRC's conclusions and recommendations for each SWMU. Table 3, located at the end of this section, summarizes the SWMUs at the facility and the recommended further actions.

SWMU 1 Wastewater Treatment System

Conclusions: The WWTS consists of a sewer system with a drain in the acid liquid blending room and the powder blending room. This sewer system vents to two holding tanks in the wastewater treatment area. The WWTS consists of two holding tanks, two treatment tanks, one settling tank, and one filter press. A 55-gallon drum is filled with dried hazardous WWTS sludge (D007), which is generated by the WWTS. The potential for release to environmental media is summarized below.

The potential for release to ground water, surface water, air, and on-site soils is low. Spills and leaks are contained in the WWTS sewer which is constructed of corrosive-resistant tile. Tanks are lined concrete and all concrete floors are epoxy sealed. The nearest surface water is 1.3 miles northwest of the facility. Particulates and airborne dust in the powder blending room are exhausted and directed to wet scrubbers. The facility does not use any solvents or products containing VOCs during its operation.

Recommendations: PRC recommends no further action for this SWMU at this time.

SWMU 2 Hazardous Waste Storage Area

Conclusions: The Hazardous Waste Storage Area is located indoors on a 10-foot by 35-foot epoxy sealed concrete pad. Dried hazardous waste sludge (D007), generated by the WWTS, is stored in 1-cubic-yard chem packs before being transported by Van Waters and Rogers to Laidlaw's South Carolina

Pinewood Hazardous Waste landfill. The potential for release to environmental media is summarized below.

The potential for release to ground water, surface water, air, and on site soils is low. The waste is dried sludge and resistant to flow. The unit is located indoors on an epoxy-sealed concrete floor. The dried sludge contains no solvents or VOCs. The facility is located in an urbanized area that is almost entirely paved.

Recommendations: PRC recommends no further action for this SWMU at this time.

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TABLE 3
SWMU SUMMARY

<u>SWMU</u>	<u>Dates of Operation</u>	<u>Evidence of Release</u>	<u>Recommended Further Action</u>
1. WWTS	1973 to present	None	No further action
2. Hazardous Waste Storage Area	1973 to present	None	No further action

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- IEPA, 1989a. IEPA Inspection Report by Mary Glynn, IEPA/EPA, July 27.**
- IEPA, 1989b. IEPA Letter to MFRC, June 20.**
- IEPA, 1991. IEPA Letter to Division file, June 10.**
- IEPA, 1991b. Notice of Disapproval of Closure Plan, August 19.**
- Illinois State Geological Survey (ISGS), 1955. Groundwater Possibilities in Northeastern Illinois, Circular 198.**
- ISGS, 1971. Summary of the Geology of the Chicago Area.**
- Metal Finishing Research Company (MFRC), 1980a. Notification of Hazardous Waste Activity Form, U.S. EPA Form 8700-IL, August 4.**
- MFRC, 1980b. Hazardous Waste Permit Application, U.S. EPA Form 3510-3, November 17.**
- MFRC, 1988. Facility Part A permit application Withdrawal Request Form, September 28.**
- National Oceanic and Atmospheric Administration (NOAA), 1991. Local Climatological Data: Annual Summary with Comparative Data for Chicago, O'Hare International Airport.**
- U.S. Department of Commerce (USDC), 1968. Climatic Atlas of the United States, U.S. Government Printing Office.**
- U.S. Environmental Protection Agency (EPA), 1993. Letter from George Hamper, EPA to Francene Harris, EPA, January 4.**
- U.S. Geological Survey (USGS), 1980. 7.5-Minute Topographic Series: Modified Englewood and Jackson Park Quadrangles, Illinois.**

ATTACHMENT A
EPA PRELIMINARY ASSESSMENT FORM 2070-12



POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE
IL

02 SITE NUMBER
ILD 045 700 945

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)
Metal Finishing Research Corporation

02 STREET, ROUTE NO. OR SPECIFIC LOCATION IDENTIFIER
4025 South Princeton Avenue

03 CITY
Chicago

04 STATE
IL

05 ZIP CODE
60609

06 COUNTY
Cook

07 COUNTY
CODE

08 CONG
DIST

09 COORDINATES: LATITUDE
41°49'01" N

LONGITUDE
87°38'00" W

10 DIRECTIONS TO SITE (Starting from nearest public road)

From Pershing Road, turn south onto Princeton Avenue. The facility is located two blocks south of the Princeton and Pershing Intersection.

III. RESPONSIBLE PARTIES

01 OWNER (if known)
Metal Finishing Research Corporation

02 STREET (Business, mailing, residential)
4025 South Princeton Avenue

03 CITY
Chicago

04 STATE
IL

05 ZIP CODE
60609

06 TELEPHONE NUMBER
(312) 373-0800

07 OPERATOR (if known and different from owner)

08 STREET (Business, mailing, residential)

09 CITY

10 STATE

11 ZIP CODE

12 TELEPHONE NUMBER

13 TYPE OF OWNERSHIP (Check one)

☒ A. PRIVATE

☐ B. FEDERAL:

(Agency Name)

☐ C. STATE

☐ D. COUNTY

☐ E. MUNICIPAL

☐ F. OTHER

(Specify)

☐ G. UNKNOWN

14. OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)

☒ A. RCRA 3010 DATE RECEIVED: 8 / 4 / 80
MONTH DAY YEAR

☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: / /
MONTH DAY YEAR

☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION

BY (Check all that apply)

☒ YES
☐ NO

DATE 1-14-93

☐ A. EPA

☒ B. EPA CONTRACTOR

☐ C. STATE

☐ D. OTHER CONTRACTOR

☐ E. LOCAL HEALTH OFFICIAL

☐ F. OTHER:

(Specify)

CONTRACTOR NAME(S): PRC Environmental Management, Inc. (PRC)

02 SITE STATUS (Check one)

☒ A. ACTIVE

☐ B. INACTIVE

☐ C. UNKNOWN

03 YEARS OF OPERATION

1962 (Present)
BEGINNING YEAR ENDING YEAR

☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

Substances related to the manufacture of chemical blends, liquid and powdered, used in the heat treating and metal finishing industry, including acids, alkalies and products containing chromium.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

Residue on floor in the chemical blending rooms.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents.)

☐ A. HIGH

☐ B. MEDIUM

☒ C. LOW

☐ D. NONE

(Inspection required promptly)

(Inspection required)

(Inspect on time-available basis)

(No further action needed; complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT
Kevin Pierard

02 OF (Agency/Organization)
U.S. EPA

03 TELEPHONE NUMBER
(312) 886-4448

04 PERSON RESPONSIBLE FOR ASSESSMENT
Michael Duffin

05 AGENCY

06 ORGANIZATION
PRC

07 TELEPHONE NUMBER
(414) 821-5894

08 DATE
02 / 04 / 93
MONTH DAY YEAR

ATTACHMENT B
VISUAL SITE INSPECTION SUMMARY AND PHOTOGRAPHS

VISUAL SITE INSPECTION SUMMARY

**Metal Finishing Research Corporation
4025 South Princeton Avenue
Chicago, Illinois 60609
ILD 045 700 945**

Date: January 14, 1993

Primary Facility Representative: Williams W. Walen, Vice President, Metal Finishing Research Corporation (MFRC)

Representative Telephone No.: (312) 373-0800

Inspection Team: Michael G. Duffin, PRC Environmental Management, Inc. (PRC)
Scott Storlid, PRC

Photographer: Scott Storlid, PRC

Weather Conditions: Clear, calm; 15 °F, 4 to 6 inches of snow on the ground

Summary of Activities:

The visual site inspection (VSI) began at 9:52 a.m. with an introductory meeting. The inspection team explained the purpose of the VSI and the agenda for the visit. Facility representatives then discussed the facility's past and current operations, solid wastes generated, and release history. Facility representatives provided the inspection team with copies of requested documents.

The VSI tour began at 10:46 a.m. The entire facility was inspected. Raw material and finished good storage areas were checked for leaking containers. None were observed. Liquid blending rooms and powder blending rooms were inspected and the Wastewater Treatment System (SWMU 1) was identified. Stains were observed around the drains in the chemical blending rooms. The Hazardous Waste Storage Area (SWMU 2) was identified and inspected. No sign of leakage was observed. Finally, the laboratory and the wastewater treatment areas were inspected. The construction and processes of the treatment unit were observed.

The tour concluded at 11:15 a.m., after which the inspection team held an exit meeting with facility representatives. The VSI was completed and the inspection team left the facility at 11:29 a.m.



Photograph No. 1

Orientation: Southwest

Location: SWMU 1

Date: 01/14/93

Description: This photograph shows the wastewater pipe leading to the drain in the liquid chemical blending room. The dark circle around the drain is from wastewater accumulation on the floor.



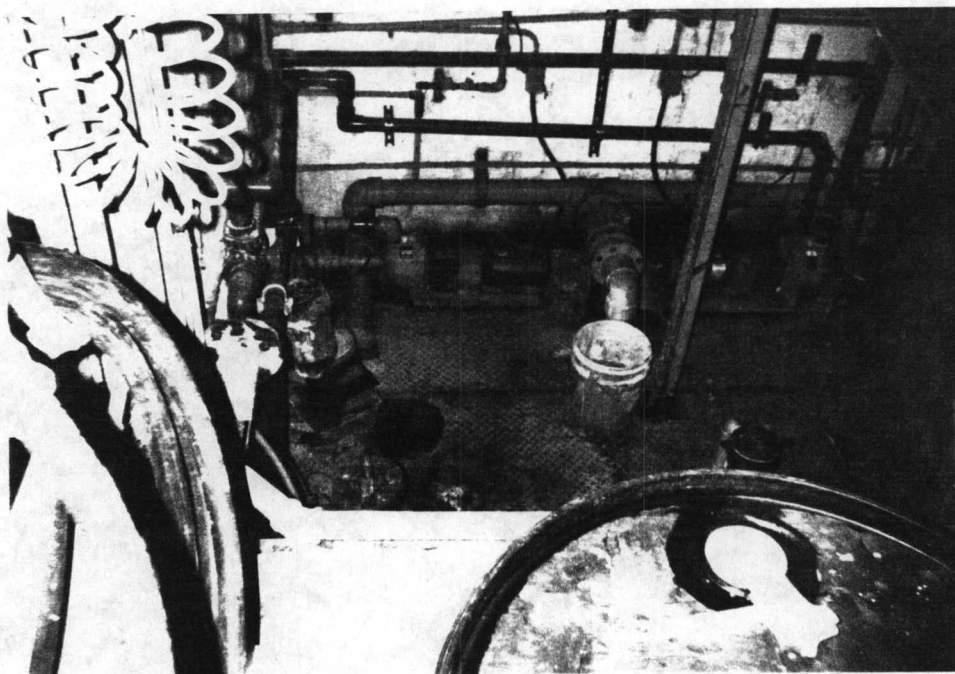
Photograph No. 2

Orientation: Southwest

Location: SWMU 1

Date: 01/14/93

Description: This photograph shows the wastewater pipe leading to the drain in the powder blending room. The floor stains are from wastewater drainage. The drain is beneath the metal roll conveyor.

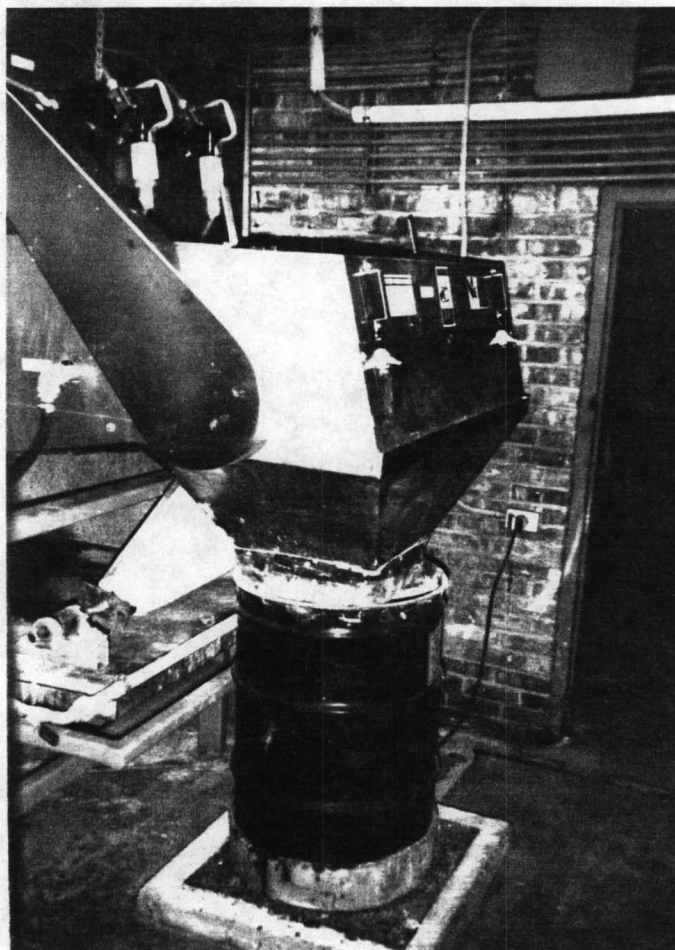


Photograph No. 3

Orientation: South

Location: SWMU 1
Date: 01/14/93

Description: This photograph shows the top of the belowground treatment tanks in the wastewater treatment area. The tanks are located below the metal diamond plates.



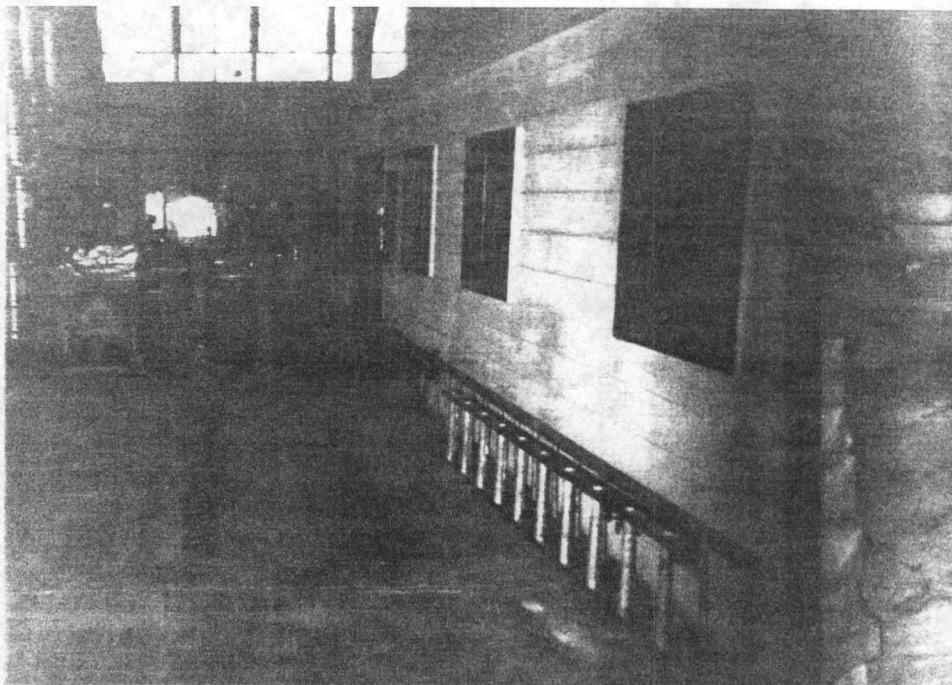
Photograph No. 4

Orientation: Southwest

Description: This photograph shows the filter press and the dried sludge being placed in a 55-gallon steel drum at the point of generation.

Location: SWMU 1

Date: 01/14/93



Photograph No. 5

Orientation: East

Description: This photograph shows the Hazardous Waste Storage Area (SWMU 2). Not shown in the picture are one full chem pack and one partially full chem pack being managed in the area.

Location: SWMU 2

Date: 01/14/93

ATTACHMENT C
VISUAL SITE INSPECTION FIELD NOTES

1/14/93

HEATBATH - PARK

METALLURGICAL CORPORATION

METAL FINISHING RESEARCH

CLEAR, CALM, 15°F

0952 ARRIVE ON SITE

MEET W/ WILLIAMS W.
SAS
WBALEN

BEGIN JSI MEETING

- MANUFACTURING FACILITY
26,000 ft² - EARLY 60's

- WAREHOUSE 26,000 ft²
~ 1989

- WAS AN EMPTY LOT -
FOR PARKING

- 13 EMPLOYEES

- BLEND PROPRIETARY
PRODUCTS FOR METAL

103

FINISHING AND HEAT-
TREATING INDUSTRIES.

- POWDERED AND LIQUID
PRODUCTS

- RAW MATERIALS -

SALTS, OXIDES,

Cu SULFATE, ACIDS,
ALKALINES

- STORED IN BAGS,
ABOVE GROUND TANKS,

55-GALLON DRUMS

AET - 4 TOTAL

- PRODUCTION

1) LIQUID BLENDING -

TANKS PRODUCT

DIRECTLY TO 55-GAL.

DRUMS OR TOTES.

TANK WASHING -

WASTE PIPED DIRECTLY

10.1 TO WTS - WIDE ARRAY
OF PRODUCT, SO UNSURE
IF WASTEWATER IS
HAZ - HAVEN'T ANALYZED
THEM.

WTS - SINCE MID 60'S
- TREATING WIDE
VARIETY OF WASTE,
DEPENDENT ON
PRODUCTION
- CHROME REDUCTION,
NEUTRALIZATION,
PH ADJUST, FLOC.
- IS 2 SYSTEMS -
1 FOR LIQUID, 1 FOR
POWDER -
EQ. HAS 1 HOLDING
TANK, PUMPED TO
TREATMENT TANK,
TREATED, PUMPED

10.5
TO SETTLING TANK,
THEN FILTERED -
EFFLUENT RELEASED

MSD:

- SLUDGE - COLLECTED
AT AT THE FILTER -
AMOUNT VARIES - 2
2³ DRUMS / WK.

DOO7

- VAN WATERS + ROGERS
LANDFILLED @ HAZ.
WASTE LANDFILL
PINWOOD, SC.

- NO PERMIT FOR EFFLUENT
RELEASE w/ MSD -
COMPLIANCE w/ CATEGORICAL
STANDARDS

- HW STORAGE AREA -
DOO7 DRUM EMPTYED

TO A CHEM-PAK

2) POWDERED PROCESS

- DUST EXHAUSTED FROM
MACHINES, THROUGH
A WET SCRUBBER -

PIPED TO WTS

- WASTEWATER FROM
WASHDOWN TO
WTS

- USED TO TREAT
FOR CHANINE^{IN DRAINAGE OF WTS}, BUT

HAVE DISCONTINUED
PRODUCING CHANINE

PRODUCTS - 6 mo AGO.

- SLUDGE INCLUDED W/
ABOVE

QC-LAB HAD ONCE TIME
GENERATION OF OFFSPEC

PRODUCT - SMALL AMOUNT.

- OCCASIONALLY CLEAN

DRUMS - WATER TO
WTS

- FLOOR DRAINS IN
THE FACILITY ARE

SEALED - TWO

DRAINS - 1 IN NET
ROOM, 1 IN POWDER
ROOM DRAIN TO
WTS

- HW STORAGE AREA

~ 1960's

- LOWE ST. IS A

WAREHOUSE W/ RAW
MATERIALS + FINISHED

GOODS - IT IS

CURRENTLY FOR SALE.

EMPTY DRUMS STORED

<p>THERE - NO H.W. STORAGE, TO HIS KNOWLEDGE, THERE NEVER WAS.</p>	<p>DUMPED INTO PAILS WHEN FULL (DOOT)</p>
<p>- OCCASIONALLY SEND OF OFF-SPEC, BAD BLEND MATERIALS - LAST TIME WAS ~ JAN 1990, USUALLY NON-REGULATED -</p>	<p>1055 PIC 1 EAST - HW SA - RAW MATERIAL STORAGE IN PRODUCTION BLDG. WET ROOM - TANKS PIPED ONTO FLOOR NEAR DRAIN TO WTS</p>
<p>1046 BEGIN USE TOUR WAREHOUSE - FINISHED GOODS, RAW MATERIAL</p>	
<p>1051 ENTER PRODUCTION BLDG. HW STORAGE AREA 35x10 FT CEMENT, NOT BIKED, 4 CHEM PAILS 1 DRUM TO BE</p>	<p>1059 PIC 2 SW - DRAIN AND FLOOR AND PIPE MENTIONED ABOVE 1102 AC 3 - SW - PIPE FROM WET SCRUBBER, DRAIN</p>

111

TO POWER (DAY) SINE^{SAYS}
WTS BENEATH ROLLER.

1105 ENTER WTS

1107 ^{SAYS} PIC 4 SOUTH LINED
CONCRETE HOLDING AND TREATMENT
TANKS BELOW PLATE
PART OF WTS -

METAL SETTLING TANK ABOVE

1109 PIC 5 SW - FILTER
PRESS + D007 DRUM
OF WTS

WTS - SEALED CONCRETE
FLOOR

- EFFLUENT 190,330 GAL
IN 1992.

1115 - END VSI - WRAP UP MEETING

- CURRENTLY, NO STORAGE
FOR GREATER THAN
90-DAYS - HAVE
STORED FOR GREATER
THAN 90-DAYS BEFORE
1987.

- POSSIBLE THAT
G.T. 90-DAYS WAS
JUST ^{TIME BETWEEN} SHIPMENTS -
WHEN THE 90 DAYS
SHOULD BEGIN WHEN
YOU HAVE A FULL DRUM.
- PLAN ON ^{RCRA} CLOSING
THE HWSA - NOT
SURE WHEN.

1129 END INTERVIEW - LEAVE
FACILITY

~~D.A. Sturges~~